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ABSTRACT

Findings from a study that investigated the consequences of role conflict, role ambiguity, and demographic and organizational factors on work satisfaction and somatic complaints are presented in this paper. Data were derived from a survey administered to 225 Taipei (Taiwan) junior high school administrators, which elicited 211 responses (a 93 percent response rate), and interviews conducted with 16 survey respondents. Findings indicate that role conflict contributes strongly to both dissatisfaction with work and reported health problems and that role ambiguity has little additional effect. Broader work responsibilities--participation in decision-making, boundary spanning, a heavy workload, and supervisory responsibility--moderate the negative relationship between role conflict and work satisfaction. A typology for correlates of role stress is developed and presented, based on the theme that role conflict was related to virtually every variable measured; and role conflict may have profound effects. Whether or not the reported role conflict and ambiguity are a function of administrators' personalities or of Taiwan's unique cultural, organizational, and political context is unclear. Six tables are included. (41 references) (LMI)

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THE CONSEQUENCES OF ROLE CONFLICT AND ROLE AMBIGUITY AMONG JUNIOR HIGH SCHOOL ADMINISTRATORS IN TAIWAN

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Abstract

A survey of 211 Taipei junior high school administrators investigated the consequences of role conflict and role ambiguity, demographic and organizational factors on work satisfaction and somatic complaints. Findings suggest that role conflict contributes strongly to both dissatisfaction with work and reported health problems, and that role ambiguity has little additional effect. Broader work responsibilities--participation in decision-making, boundary spanning, a heavy workload, and supervisory responsibility--moderate the negative relationship between role conflict and work satisfaction. A typology for correlates of role stress is developed and presented.

THE CONSEQUENCES OF ROLE CONFLICT AND ROLE AMBIGUITY AMONG JUNIOR HIGH SCHOOL ADMINISTRATORS IN TAIWAN

Introduction

The concepts of role conflict and role ambiguity, and to a lesser extent their consequences, have been researched extensively in English speaking private sector workplaces, but less frequently in educational organizations, and rarely in non-Western school settings. In this research, we present results of a study of 225 Taiwanese junior high school administrators, and examine whether these concepts are applicable to, and useful for, understanding the interplay between role stress, its consequences, and organizational structure in a culture about which researchers in social and organizational psychology have written little. In a previous paper, we described the sources of role conflict and role ambiguity in this sample. Specifically we found that heavy workloads and constant boundary spanning predicted role conflict; supervisory support, higher academic training, and preference for Confucianism as a personal philosophy reduced role conflict. Participation in decision making, supervisory support, boundary spanning, formalization, and tenure in school administration decrease role ambiguity (Chang and Goldman, 1990). Here we discuss potential consequences of role conflict and ambiguity that have been identified in the literature on Western organizations, specifically job satisfaction and reported somatic complaints.

Role conflicts occur when administrators confront "the simultaneous occurrence of two or more role expectations such that compliance with one would make compliance with the other more difficult" (Katz and Kahn, 1978, p. 204). In short, it represents opposing, irreconcilable demands. Role ambiguity is a function of the discrepancy between the information available to administrators and the information required for adequate performance of their roles. In short, role ambiguity exists when, for some reason, individuals do not know what is expected of them. Role ambiguity has a less extensive research history, and, perhaps for that reason, the two concepts have often been confused. Getzels and Guba (1955), for example, used the term "ambiguity" in some of their questionnaire items in a survey designed to study role conflict. Although role conflict and ambiguity are similar in that they may interfere with effective role behavior, the two concepts are conceptually distinguishable. In education, Calderwood (1989), Eisenhauer, *et al.* (1985), Erez and Goldstein (1981), Kottkamp and Mansfield (1985), Levan, *et al.* (1981), and Singleton (1987) have all conducted surveys utilizing that distinction in research about educational administrators in the United States, Canada, and Isreal. And variables related to each of the two aspects of role stress may differ; for example, Podsakoff, *et al.* (1986) found that formalization decreased role ambiguity but not role conflict. Moreover, we have previously reported results of a factor analysis indicating that role conflict and role ambiguity are statistically distinct. We should note, however, that three recent psychometric studies (Harris, 1991; King and King,

1990; Netemeyer, *et al.*, 1990) have been critical of how the two concepts have been measured and raised some questions about their overall validity.

Most role conf. .t and ambiguity research uses the role episode model developed by Kahn *et al.* (1964) or the role behavior model suggested by Getzels *et al.* (1968). Kahn *et al.* suggest that specific organizational, interpersonal, and personal factors cause role conflict and role ambiguity, which in turn, generate such negative consequences as job dissatisfaction and somatic complaints. Getzels *et al.* (1968) suggest that role conflicts in a specific social system have their roots in the larger culture housing the system. We have attempted to combine the two models in Figure 1.

(INSERT FIGURE 1 ABOUT HERE)

This model implicitly assumes causality, an assumption generally accepted by most researchers and, tested successfully by some experimental and longitudinal studies, for example Miles (1976), Jackson (1983), and Szilagyi (1977). However, the research does not rule out the possibility of reverse or reciprocal causality as Van Sell *et al.* (1981) argue. For example, while role conflict may result in job dissatisfaction, administrators may infer role conflict because they feel dissatisfied. In addition, Jackson and Schuler (1985) have suggested that role conflict and ambiguity may be influenced by such moderator variables as social support and participation in decision-making.

Past research findings indicate that role conflict and ambiguity are negatively related to job satisfaction (Berkowitz, 1980; Brief and Aldag, 1976; Jackson, 1983; Kahn *et al.*, 1964) and positively related to somatic complaints (Caplan *et al.*, 1980; Morris, 1976). Although most previous studies have not focused on educational administrators, those studies conducted in American schools (Hansen, 1984; Kottkamp and Mansfield, 1985; Kottkamp and Travlos, 1986; Morris, 1976; Singleton, 1987), in Welsh schools (Williams and Robertson, 1990), Canadian schools (Creed and Enns, 1979), and Taiwanese junior high schools (e.g., Huang, 1985; Liau, 1986) report similar results. These relationships have also been reported by researchers studying other types of organizations predominantly staffed by semi-professionals such as nursing (Bacharach et al, 1991; Jamal, 1990), social workers (Himle et al, 1989), and engineers (Bacharach, et al, 1991), and there is considerable evidence that schools are potentially high stress environments (Sutton, 1984; Triesen and Williams, 1985). Jackson and Schuler (1985, p. 44) argue that the effects of role conflict and ambiguity on job dissatisfaction and tension are likely to be influenced and mediated by specific moderator variables such as social support and participation in decision making. Where role conflict is high, for instance, employees who have social support and who participate in decision-making experience less anxiety than those who don't.

Data Collection and Methodology

Our research population consists of administrators in Taipei junior high schools. The research strategy included both a self-administered questionnaire and semistructured interviews as data sources. In Fall, 1988, questionnaire items

for the studies listed below were translated into Chinese, pretested by 15 Taipei junior high school administrators, and then distributed to 225 administrators at 25 randomly selected Taipei junior high schools. Two hundred and eleven of these, 134 men and 77 women) returned the questionnaire, providing us with a response rate of 93 percent. The respondents included 23 principals, 94 office heads, and 94 section heads. The duties of office heads and section heads correspond roughly to those of vice-principal and department head respectively. The schools are large by American standards, and enroll between 1,000 to 3,000 thirteen to fifteen year-olds. In Taiwan, junior high schools are the primary educational arena where young men and women are sorted, via a national examination, into the academic and vocational streams that will determine their eventual occupational status.

The specific role conflict and role ambiguity questionnaire items were originally developed by Rizzo *et al.* (1970) and modified to fit the context of Taipei junior high schools. Factor analyses with these data indicated unambiguously that role conflict and role ambiguity were separate and distinct (Chang and Goldman, 1990). Participation in decision making items were adapted from Vroom (1963), and supervisory support items from Caplan *et al.* (1980). The somatic complaints scale was derived by summing responses to two items used by Morris (1976): "how often does your work make you feel jumpy or nervous," and "how often do you have [physical difficulties] you think are caused by your experience at work." Job satisfaction consisted of a four item summative scale, used previously by Schmuck and Runkel (1985), that asked about general work satisfaction and feelings about how much autonomy, pride of accomplishment, and affiliation existed in their jobs. Respondents were also asked how much autonomy, pride of accomplishment, and affiliation they wanted on the job, allowing us to construct a relative deprivation scale by subtracting the ideal level of work satisfaction from the actual score. Means and standard deviations for all variables are presented in Table 1, a correlation matrix in Table 2.

INSERT TABLE 1 AND TABLE 2 ABOUT HERE

We also interviewed sixteen of the questionnaire respondents. Interviewees were representative of the total questionnaire sample. They came from six schools: two small-sized, three moderate-sized, and one large school. Half reported a role conflict score above, and half reported a score below the sample mean. Interviews averaged 2 hours, ranging form 1-1/2 hours to 3 hours and were tape recorded with the respondents' permission. Interviews were conducted in Chinese and translated into English as they were transcribed. The interviews responses, reported in Chang and Goldman (1990) helped us identify five arenas in which role conflict is common: (1) conflict between cultivating good citizens and preparing students for entrance examinations; (2) conflicts that result from internal and external boundary-spanning; (3) conflict between respecting student rights and exercising corporal punishment; (4) conflict between bureaucratic linking of merit and reward and cultural norms involving personal ties and obligations; (5) role overload.

Significantly, raw scores on the role conflict scale were virtually identical in mean and standard deviation to those reported by Eisenhauer *et al.* (1984) and Kottkamp and Travlos (1986) who studied American schools. In fact, the mean response was 3.01 in a scale ranging from 1 to five. Distribution of the role ambiguity scale, however, differed markedly from those reported by American researchers. The mean response was only 1.98 on the 1 through 5 scale. Does this mean that Taiwanese administrator roles and responsibilities are clear-cut and predictable? Generally yes, centralized policy tends to standardize responsibilities within the school system, and few administrators either come from outside or move into central administration. Role awareness seems to be high. On the other hand, there is as much variance for role ambiguity as there is for role conflict. Administrators who are high on that scale (operationalized somewhat arbitrarily as the top 30 percent, those with scores of 2.25 and above), fit an identifiable profile.

Findings and Interpretations

This section begins with a discussion of findings from a series of three multiple regressions examining the possible effects of demographic, organizational, and especially role stress on work satisfaction, relative deprivation, and somatic complaints. The presentation then moves to an interpretive profile that combines role conflict and role ambiguity and attempts to develop profiles of four categories and consequences of role stress in school administration: integrated, passive, assertive, and stressed school administrators.

INSERT TABLE 3 ABOUT HERE

Table 3 presents a regression equation on work satisfaction. The demographic, organizational, and role stress variables allow us to account for almost half the variance in work satisfaction. Role conflict has a major negative impact, and this is quite consistent with findings reported elsewhere in the literature. It is not surprising that conflicting pressures from students, parents, superiors, subordinates, and outsiders should adversely affect perceived quality of worklife and satisfaction with it.

Jackson and Schuler (1985) argued that organizational factors might mediate the particular consequence of role stress on work satisfaction. Participation in decisions, supervisory responsibility, boundary spanning, and workload were all positively related to work satisfaction when role stress, demographic, and other organizational variables were controlled. The individual effects were statistically significant, but small; however, the collective impact suggests that some important influences may be at work. Specifically, each of these four factors can be interpreted as reflecting a degree of control over some aspect of day-to-day worklife. Participation in decisions and supervisory responsibility imply a degree of empowerment and boundary spanning contact with a broader world than that of the school itself. For these administrators, a heavy workload may be interpreted not primarily as a set of demands but as an appropriate response to them the demands. These findings are consistent with Cobb (1976) and Beehr (1976), who indicated that social support and

participation moderate the negative effects of role stress. These data provide some support for their hypothesis, although cultural issues make unambiguous interpretations impossible. Note that House and Rizzo argue that the experience of role conflict by an American administrator may be regarded as an indicator or cue that he or she is performing effectively. By contrast, the inability to maintain harmonious relationships will entail strong anxiety and job dissatisfaction in the Chinese society, in which harmony is highly valued.

Role ambiguity, however, makes little additional negative contribution. Uncertainty, or even confusion, about job responsibilities may be troublesome to school administrators, but apparently it has only a small effect on how they feel about their jobs. Moreover, recall that role ambiguity had a relatively low mean (1.98 on a 5 point scale) for this sample. At this level, role ambiguity is not a critical, serious job stressor for Taiwanese school administrators. The weak effects of role ambiguity on job satisfaction are inconsistent with the research of House and Rizzo (1972) and Miles (1976). Adler and Jelinek (1986, p. 84) indicate that American administrators believe they can control their own environment and what happens to them within that environment. The administrators in Taiwan, by contrast, may see an environment they believe is determined by factors beyond their control. Thus, they may feel less anxiety and job dissatisfaction when they are incapable of controlling its uncertainty than do their American counterparts.

The major surprise in this table is the quite strong negative relationship between age and work satisfaction. In fact, age is more robust predictor of work satisfaction than any factor but role stress. We might suspect that this relationship is a consequence of career blockage--administrators locked into an office headship or section chiefdom feel relatively deprived because they are "too old" for their position and see few chances for advancement. Note, however, that position, job tenure, and administrative experience are held constant in the equation. If anything, the results suggest the contrary as are the small, non-significant, relationships between work satisfaction and tenure and experience. The finding is doubly interesting because one suspects that the respect for elders and the relationship between age and wisdom seems so central to Chinese culture.

The regression on relative deprivation about work satisfaction (presented in Table 4), that is the gap between what respondents consider their actual and their preferred levels of work satisfaction, reinforces these impressions. Demographic variables had little effect on relative deprivation, although experience appears to reduce it marginally, but not to a degree that presents statistical significance. Extrapolating from this very weak finding suggests that administrative experience helps individuals match their expectations to reality and/or vice versa, but this is a bit puzzling in view of the much stronger negative relationship between age and work satisfaction.

INSERT TABLE 4 ABOUT HERE

Organizational factors, similarly, play little, if any, role in explaining relative deprivation. The empowerment and awareness that made some contribution to explaining work satisfaction play little role here. French and Caplan (1973), Caplan *et al.* (1975), and Cobb (1976) suggest that supervisory support may buffer the relationships between role conflict and ambiguity, and negative outcomes. The Taiwan administrator findings reinforce these contentions, and they show up a bit more strongly in the relative deprivation than the work satisfaction regression. We suspect that in role conflict situations, support from superiors helps administrators achieve specific goals and, more generally, helps maintain job satisfaction. For example when administrators encounter external role pressures such as parental demands for extra study sessions for their children, superiors may help resolve difficulties. Note, however, that superiors may be the source of some role conflicts, for instance when a principal asks a head of a general affairs office to accept an school equipment which is not on the approved list.

The effects of role conflict on relative deprivation, however, are unambiguous, and strong. Role ambiguity has a similar, but much weaker, effect. Clearly role stress, especially role conflict, reduces individual work satisfaction, both absolutely and relative to what individuals want from their jobs. These data suggest that these effects have little to do with identifiable demographic or organizational factors.

Only role conflict has a statistically significant impact on somatic complaints. This variable differs from work satisfaction in its concreteness--for instance the questionnaire asks "have you experienced dizziness, etc?"--although respondents were asked to attribute complaints to the work situation. All else being equal, statistically at least, those reporting role conflict also reported somatic complaints, and the relationship was mediated marginally, if at all, by demographic or organizational factors, or even by role ambiguity. This table supports Caplan *et al.* (1980) and Morris (1976) who stressed direct effects and is less supportive of such researchers as Jackson and Schuler (1985) who emphasize the compensating effects of organizational characteristics.

INSERT TABLE 5 ABOUT HERE

What the tables above suggest is that role conflict is related to practically everything, and that role ambiguity may have modest, but complementary additive effects. To examine this issue more closely, Table 6 presents a one-way analysis of variance that divides role conflict and role ambiguity into high and low brackets, and combines the two variables into one--"role stress--and a two continuous scales into four categories.

Findings presented in Table 6 show clear differences between respondents in each of the four categories. Those school administrators with who reported little role stress, that is they were low on both role ambiguity and role conflict scales, generally typified sample means on most measures. However, they rated themselves high on participation in the decision-making process and high in support from their supervisors and exhibited higher work satisfaction and fewer

somatic complaints than their more stressed peers. These administrators are "integrated," at least to the extent that they have adjusted their activities and perceptions to conform with the expectations of their jobs.

INSERT TABLE 6 ABOUT HERE

A profile of one interviewee seems to exemplify this characterization. She has been a teaching head for 10 years; familiarity with the position provides her with a clear role conception. During the interview, she reported that she had learned a variety of administrative skills from her principal, from her administrative experience generally, and from an in-service program in which she was enrolled. She is able to resolve the conflicts she occasionally encounters at her job. Where she cannot, she asks the help of her principal. Her principal trusts her, gives her autonomy, and often invites her to participate in school decisions. Although she is very busy, she feels very satisfied with her job. Because of the support and trust of her principal, she is willing to do extra work for the school and the principal.

"Stressed" administrators, that is those high on role ambiguity and role conflict were quite different. They believed they had very high workloads. The volume of work, whether perceived or actual, would seem to be correlated with conflicting or contradictory demands and account for role conflict. By contrast to low-stress administrators these individuals were low in both their participation in decision-making and in the support they received from supervisors. It seems likely that stress for them resulted from the combination of heavy demands and the lack of close or satisfying connections with superordinate authorities. Responses to questions indicate that they had not come fully to terms with their responsibilities. Their failure to make connections upward, or their superiors' failure to provide staff development suggests that their leadership and management skills have not reached full maturity. This group was least likely to indicate a preference for Confucianism as a religious or philosophical preference.

Educators who experience high role conflict, but low role ambiguity are the modal administrators in the sample, perhaps even the ideal type. As a group they ranked highest on virtually every measure we computed. However, they were relatively satisfied with their jobs, and reported fewer health complaints than stressed administrators. Principals were overrepresented, yet 80 percent of the group were not principals. These administrators said they did everything including supervising others, connecting with outsiders and superiors, and participating in decisions. No wonder they said their workload was high! Evidently they perceive the job requirements in an activist mode; even though they understand the system to be formalized, this is seemingly not a disadvantage for them. They are "assertive" administrators.

On example is a male Office Head, who has been a school administrator for 18 years and who is involved both with the curriculum and with the faculty. His clear understanding of school operations comes from long service and close contacts with teachers, parents, and local community leaders. However, he complained that parents and local community leaders exercise strong pressure

on him to promote students regardless of performance on the entrance exam. Parents' demands go against the regulations designed to reduce pressure on students. This bothers him, and he indicated he would like to avoid the dilemma. For this administrator, role conflict is a problem, but is an inevitable part of his job.

Administrators low on role conflict, but high on role ambiguity, are few in number, and they differ profoundly from their colleagues. Most are section heads, and hence have few supervisory responsibilities. They have comparatively little administrative experience or tenure in their current positions. They report much lower workloads and boundary spanning activities than other administrators and do not see their schools as highly bureaucratized. What this implies is an unwillingness either to confront the system or to promote their careers by pushing their job responsibilities outwards. The profile suggests that they are "passive" administrators who do not take risks that might lead to role conflict. They are low in participation in decisions and in support from supervisors, but not as low as administrators high on both role conflict and role ambiguity.

One section chief interview profiles a passive administrator. She complained that her principal views the position as ancillary, and does not invite her to participate in school decisions even in her area. She keeps close contact with her student clients, but seldom interacts with external constituents. She feels her job lacks a clear-cut role description and her role overlaps with that of school disciplinarians. She enjoys her current low level of workload, which allows her more free time to study an in-service program than did her former position at a teaching office, but she feels unhappy with her principal because of the lack of trust and support he gives her.

Conclusions

On the basis of the research findings reported above, two tentative conclusions can be made. First, role conflict is a more powerful variable in the prediction of job satisfaction and somatic complaints than is either role ambiguity or other demographic and organizational factors. Second, the moderating effects of supervisory support are weak, although do appear to reduce the effects of the relationship between role conflict and relative deprivation. Third, work involvement/work responsibility variables such as boundary spanning, supervisory responsibility, participation in decisions, and workload do mediate the adverse relationship between work satisfaction and role conflict. Fourth, and most important, role conflict is related to virtually every variable we measured, and its effects may be profound.

Certainly, the results shown here tend to confirm, in a general sense, what others, researching work settings inside and outside of education, have found. What is not clear from these findings is the degree to which personality factors or behavioral characteristics may affect *both* role conflict and work satisfaction. It is also possible that the measurement tools used in role conflict/work satisfaction research, as they may apply to an Asian setting, need additional refinement.

While the results of this paper and our previous paper must be considered as tentative, they contribute to understanding the real work life of Taipei junior high school administrators. More importantly, we find that not only the administrators' role conflict and ambiguity are related to the Chinese cultural characteristics, but also the different effects of role conflict and ambiguity on job satisfaction and somatic complaints can be attributed to the unique Chinese culture. However, without further research in a multi-cultural setting, we can only guess whether these reported conflict and ambiguity are characteristic of the Taipei administrators' personalities or result from organizational, political, and cultural pressures more-or-less unique to Taiwan.

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TABLE 1

VARIABLES

	Mean	S.D.	N	Notes
DEMOGRAPHIC VARIABLES				
Position	2.34	0.67	211	1=principal, 2=office head, 3=section head
Admin. Experience	10.37	7.37	211	in years
Tenure in Position	5.04	7.37	207	in years
Age	42.11	9.04	209	in years
Gender	0.36	0.48	211	0=male, 1=female (64% male)
Marital Status	0.89	0.31	211	0=unmarried, 1=married (89% married)
Philosophy of life	0.78	0.41	211	0=other, 1=confucian (78% confucian)
ORGANIZATIONAL VARIABLES				
Boundary Spanning	2.84	0.81	211	scale from 1 (low) to 5 (high)
Workload	3.99	0.73	211	scale from 1 (low) to 5 (high)
Formalization	3.66	0.59	211	scale from 1 (low) to 5 (high)
Participation in Decisions	3.47	0.67	211	scale from 1 (low) to 5 (high)
Support from Supervisors	3.80	0.78	211	scale from 1 (low) to 5 (high)
Supervisory Responsibility	3.41	1.21	211	scale from 1 (low) to 5 (high)
School Size	5.08	2.45	211	1=LT 500, 2=501-1000, 3=1001-1500, 4=1501-2000, 5=2001-2500, 6=2501-3000 7=3001-3500, 8=3501-4000
ROLE STRESS VARIABLES				
Role Conflict	3.01	0.60	211	scale from 1 (low) to 5 (high)
Role Ambiguity	1.98	0.54	211	scale from 1 (low) to 5 (high)
SATISFACTION VARIABLES				
Work Satisfaction	3.53	0.62	211	scale from 1 (low) to 5 (high)
Relative Deprivation	0.84	0.65	211	
Somatic Complaints	2.92	0.67	211	scale from 1 (low) to 5 (high)

TABLE 2

CORRELATION MATRIX

VARIABLE	POS	EXP	TEN	AGE	GEN	MAR	PHL	SIZ	BOU	WOR	FOR	PAR	SUP	SPV	CON	AMB	SAT	REL	SOM
Position		-.62	-.29	-.49	.39	-.21	.04	.02	-.60	-.19	-.06	-.08	.06	-.69	-.14	-.25	-.13	-.02	.13
Admin. Experience			.58	.67	-.42	.27	-.11	.12	.45	.21	.18	-.05	-.10	.42	.24	-.26	-.04	-.02	-.01
Tenure in Position				.48	-.26	.18	-.11	.14	.10	.04	.14	-.17	-.13	.08	.12	-.15	-.04	.02	-.08
Age					-.42	.36	-.21	.14	.36	.16	.24	-.04	-.03	.34	.14	-.22	-.09	.02	-.07
Gender						-.24	.17	.03	-.24	-.15	-.17	.01	-.05	-.32	-.21	.17	.07	-.11	.00
Marital Status							-.11	.12	.14	-.07	.07	-.06	-.03	.18	.14	-.02	-.09	-.02	-.03
Philosophy of life								-.04	.00	.03	-.08	.01	.04	-.01	.18	.09	-.05	.08	.14
School Size									.10	.09	.08	.03	.08	.03	-.01	-.11	.12	-.11	-.06
Boundary Spanning										.35	.16	.37	.18	.63	.27	-.45	.29	-.05	-.04
Workload											.29	.28	.25	.29	.36	-.35	.20	.01	.20
Formalization												.09	.17	.12	.18	-.30	.02	.04	.11
Participation in Decisions													.64	.40	-.04	-.58	.51	-.34	-.10
Support from Supervisors														.18	-.11	-.49	.42	-.36	-.07
Supervisory Responsibility															.18	-.42	.31	-.07	-.07
Role Conflict															-.02	-.30	.45	.43	
Role Ambiguity																-.43	.30	.08	
Work Satisfaction																	-.69	-.26	
Relative Deprivation																		.22	
Somatic Complaints																			

boldface: $p < .01$
italics: $p < .05$

TABLE 3

REGRESSION ON WORK SATISFACTION

	B	Beta	R	Part/ Cor	Partial	Signi-ficance
DEMOGRAPHIC VARIABLES						
position	.03	.04	-.13	.02	.03	n.s
administrative experience (years)	.01	.07	.02	.04	.06	n.s.
tenure in position (years)	.01	.10	-.07	-.04	.10	n.s.
age	-.02	-.25	-.09	-.17	-.22	.001>p
gender (male=0; female=1)	.05	.07	.07	.06	.08	n.s.
marital status (married=1)	-.01	.01	-.09	-.01	-.01	n.s.
philosophy (confucian=1)	.04	.03	.05	.02	.03	n.s.
ORGANIZATIONAL VARIABLES						
school size (coded)	.01	.06	.12	.06	.08	n.s.
workload	.12	.15	.20	.12	.16	.05>p
perceived formalization	-.04	-.03	.02	-.03	-.04	n.s.
participation in decisions	.18	.19	.51	.12	.1	.05>p
boundary spanning	.12	.16	.29	.11	.15	.05>p
supervisory responsibility	.10	.19	.31	.11	.15	.05>p
suppport from supervisors	.09	.11	.42	.08	.11	n.s.
ROLE STRESS						
role conflict	-.39	-.38	-.30	-.31	-.39	.001>p
role ambiguity	-.13	-.11	-.43	-.08	-.10	n.s.

$R^2 = .469$
$.001 > p$
$N = 207$

TABLE 4

REGRESSION ON RELATIVE DEPRIVATION

	B	Beta	R	Part/ Cor	Partial	Signi-ficance
DEMOGRAPHIC VARIABLES						
position	.08	.09	.02	.05	.01	n.s.
administrative experience (years)	.01	.15	-.02	.09	.11	n.s.
tenure in position (years)	.00	.02	-.02	.02	.02	n.s.
age	.00	-.05	-.02	-.03	-.04	n.s.
gender (male=0; female=1)	.12	.09	.11	.08	.10	n.s.
marital status (married=1)	.22	.10	.02	.09	.12	n.s.
philosophy (confucian=1)	-.10	.00	.08	.00	-.01	n.s.
ORGANIZATIONAL VARIABLES						
school size (coded)	.01	.04	.11	.04	.05	n.s.
workload	.05	.00	-.01	.05	.06	n.s.
perceived formalization	-.08	-.07	-.04	-.07	-.08	n.s.
participation in decisions	.13	.13	.34	.08	.10	n.s.
boundary spanning	.01	.01	.09	.01	.01	n.s.
supervisory responsibility	.01	.02	.07	.02	.02	n.s.
suppport from supervisors	.14	.16	.36	.12	.15	.05>p
ROLE STRESS						
role conflict	-.50	-.46	-.45	-.38	-.43	.001>p
role ambiguity	-17	-.14	-.30	-.10	-.12	.10>p

$R^2 = .376$
$.001 > p$
$N = 207$

TABLE 5

REGRESSION ON SOMATIC COMPLAINTS

	B	Beta	R	Part/ Cor	Partial	Signi-ficance
DEMOGRAPHIC VARIABLES						
position	.15	.15	.13	.09	.10	n.s.
administrative experience (years)	.10	.13	-.01	.08	.09	n.s.
tenure in position (years)	-.02	-.14	-.08	-.11	-.12	.10>p
age	.00	-.03	-.07	-.02	-.03	n.s.
gender (male=0; female=1)	.03	.02	.00	.02	.02	n.s.
marital status (married=1)	-.04	-.02	-.03	-.02	-.02	n.s.
philosophy (confucian=1)	-.07	-.04	-.14	-.04	-.05	n.s.
ORGANIZATIONAL VARIABLES						
school size (coded)	-.01	-.05	-.06	-.05	-.06	n.s.
workload	.11	.12	.20	.09	.11	n.s.
perceived formalization	.05	.05	.11	.04	.05	n.s.
participation in decisions	-.09	-.09	-.10	-.06	-.07	n.s.
boundary spanning	-.07	-.09	-.04	-.06	-.07	n.s.
supervisory responsibility	-.01	-.01	-.08	-.01	-.01	n.s.
suppport from supervisors	.00	.00	-.07	.00	.00	n.s.
ROLE STRESS						
role conflict	.46	.42	.43	.34	.37	.001>p
role ambiguity	.00	.00	.08	.00	.00	n.s.

$R^2 = .265$
$.001 > p$
$N = 207$

TABLE 6

ROLE CONFLICT/ROLE AMBIGUITY BY DEMOGRAPHIC AND ORGANIZATIONAL VARIABLES

	Role Conflict/Role Ambiguity					
	Low/ Low	Low/ High	High/ Low	High/ High	Sample Mean	Means Test
DEMOGRAPHIC VARIABLES						
position	2.3	2.7	2.2	2.4	2.33	p<.01
administrative experience (years)	10.4	6.9	12.4	8.9	10.37	p<.01
tenure in position (years)	5.0	3.8	6.1	3.7	5.04	p<.10
age	42.9	39.7	43.6	39.8	42.11	p<.05
gender (male=0; female=1)	0.31	0.64	0.27	0.40	0.36	p<.01
marital status (married=1)	0.84	0.89	0.95	0.87	0.89	n.s.
philosophy (confucian=1)	0.87	0.81	0.76	0.63	0.78	p<.10
ORGANIZATIONAL VARIABLES						
school size (coded)	5.0	5.4	5.4	4.1	5.08	p<.10
workload	3.9	3.4	4.3	4.0	3.99	p<.001
perceived formalization	3.7	3.3	3.8	3.6	3.66	p<.01
participation in decisions	3.6	3.2	3.7	2.8	3.47	p<.001
boundary spanning	2.8	2.2	3.2	2.5	2.84	p<.001
supervisory responsibility	3.4	2.6	3.8	3.1	3.41	p<.001
suppport from supervisors	4.1	3.5	3.9	3.2	3.80	p<.001
SATISFACTION VARIABLES						
work satisfaction	3.9	3.3	3.5	3.1	3.53	p<.001
relative deprivation	0.46	0.82	0.90	1.42	0.84	p<.001
somatic complaints	2.6	2.8	3.1	3.3	2.92	p<.001
N	61	36	84	30		211

Role Conflict: 1.00 to 2.99 = low (N=95); 3.00 to 4.99 = high (N=112)
Role Ambiguity: 1 to 2.25 low (N=142); 2.26 to 4.99= high (N=65)